IN THE CLAIMS:

The following is a complete listing of the claims, and replaces all earlier version and listings.

1. (original): An image processing apparatus for, when a frame rate, which can assure sufficiently high image quality of a moving image, is expressed by N frames/sec, playing back moving image data, which has a frame rate of M (M > N) frames/sec higher than that frame rate, and respective frames of which are compression-encoded to be independently decodable, comprising:

decoding means for decoding the compression-encoded frames;

switching means for switching a playback mode between a normal playback mode and slow playback mode;

first playback means for, when said switching means selects the normal playback mode, reading out frames from the image data at a first frame interval, decoding the readout frames by said decoding means, and playing back the decoded frames at substantially N frames/sec; and

second playback means for, when said switching means selects the slow playback mode, reading out frames from the image data at a second frame interval narrower than the first frame interval, decoding the readout frames by said decoding means, and playing back the decoded frames at least at substantially N frames/sec.

2. (original): The apparatus according to claim 1, wherein the compressed moving image data has a structure which includes both a frame group captured at M frames/sec, and a frame group captured at N frames/sec, and

said second playback means is applied to the frame group captured at M frames/sec.

3. (original): The apparatus according to claim 1, wherein the compressed moving image data has a structure which includes both a frame group captured at M frames/sec, and a frame group captured at N frames/sec, and

said apparatus further comprises third playback means for playing back the frame group captured at N frames/sec at a normal frame rate, and playing back the frame group captured at M frames/sec in the slow playback mode at the normal frame rate without decimation upon playing back the moving image data.

4. (original): The apparatus according to claim 3, wherein said second playback means includes a manual mode that executes slow playback upon reception of a slow playback instruction, and an auto mode that executes a slow playback process irrespective of the presence/absence of a slow playback instruction.

5. (original): The apparatus according to claim 1, wherein the respective frames of the moving image data are encoded by JPEG2000 encoding.

6. (original): The apparatus according to claim 1, wherein the moving image data is encoded by MotionJPEG encoding.

7. (original): An image processing method of playing back, when a frame rate, which can assure sufficiently high image quality of a moving image, is expressed by N frames/sec, moving image data, which has a frame rate of M (M > N) frames/sec higher than that frame rate, and respective frames of which are compression-encoded to be independently decodable, comprising:

a decoding step of decoding the compression-encoded frames;

a first playback step of reading out, when switching means for switching a playback mode between a normal playback mode and slow playback mode selects the normal playback mode, frames from the image data at a first frame interval, decoding the readout frames in the decoding step, and playing back the decoded frames at substantially N frames/sec; and

a second playback step of reading out, when the switching means selects the slow playback mode, frames from the image data at a second frame interval narrower than the first frame interval, decoding the readout frames in the decoding step, and playing back the decoded frames at least at substantially N frames/sec.

8. (currently amended): A computer-readable medium storing a computer program ~~serving~~ for causing a computer to serve as an image processing apparatus for, when a frame rate, which can assure sufficiently high image quality of a moving image, is expressed by N frames/sec, playing back moving image data, which has a

frame rate of M (M > N) frames/sec higher than that frame rate, and respective frames of which are compression-encoded to be independently decodable, said program serving as:

decoding means for decoding the compression-encoded frames;

first playback means for, when switching means for switching a playback mode between a normal playback mode and slow playback mode selects the normal playback mode, reading out frames from the image data at a first frame interval, decoding the readout frames by said decoding means, and playing back the decoded frames at substantially N frames/sec; and

second playback means for, when said switching means selects the slow playback mode, reading out frames from the image data at a second frame interval narrower than the first frame interval, decoding the readout frames by said decoding means, and playing back the decoded frames at least at substantially N frames/sec.

9. (canceled).

10. (currently amended): An image processing apparatus for playing back moving image data, respective frames of which are hierarchically compression-encoded to be independently decodable, comprising:

decoding means for decoding the compression-encoded frames;

switching means for switching a playback mode between a normal playback mode and slow playback mode;

first playback means for, when said switching means selects the normal playback mode, reading out data within a first range from low to high hierarchical

components of respective frames from the moving image data, decoding the readout frames by said decoding means, and playing back the decoded frames; and

second playback means for, when said switching means selects the slow playback mode, reading out data within a second range, broader than the first range, from low to high hierarchical components of respective frames from the moving image data, decoding the readout frames by said decoding means, and playing back the decoded frames,

wherein a high-definition frame group in the moving image data is moving image data which, when a frame rate that can assure sufficiently high image quality of a moving image is expressed by N frames/sec, has a frame rate of M (M > N) frames/sec higher than that frame rate, and respective frames of which are compression-encoded to be independently decodable,

wherein said first playback means reads out respective frames from the image data at a first frame interval, decodes the readout frames by said decoding means, and plays back the decoded frames at substantially N frames/sec, and

wherein said second playback means reads out respective frames from the image data at a second frame interval narrower than the first frame interval, decodes the readout frames by said decoding means, and plays back the decoded frames at least at substantially N frames/sec.

11. (original): The apparatus according to claim 10, wherein the compression-encoded moving image data is a data stream which includes both a

high-definition frame group, and a low-definition frame group, and said second playback means is applied to only the high-definition frame group.

12. (original): The apparatus according to claim 10, wherein the compression-encoded moving image data is a data stream which includes both a high-definition frame group, and a low-definition frame group, and

said apparatus further comprises control means for, when the high-definition frame group is played back, controlling to play back using said second playback means.

13. (original): The apparatus according to claim 10, wherein said second playback means includes a manual mode that executes slow playback upon reception of a slow playback instruction, and an auto mode that executes a slow playback process irrespective of the presence/absence of a slow playback instruction.

14. (original): The apparatus according to claim 10, wherein the respective frames of the moving image data are encoded by JPEG2000 encoding.

15. (original): The apparatus according to claim 10, wherein the moving image data is encoded by MotionJPEG encoding.

16. (cancelled).

17. (currently amended): The apparatus according to claim [[16]] 10, wherein the compressed moving image data has a structure which includes both a frame group captured at M frames/sec, and a frame group captured at N frames/sec, and said second playback means is applied to the frame group captured at M frames/sec.

18. (currently amended): The apparatus according to claim [[16]] 10, wherein the compressed moving image data has a structure which includes both a frame group captured at M frames/sec, and a frame group captured at N frames/sec, and said apparatus further comprises third playback means for playing back the frame group captured at N frames/sec at a normal frame rate, and playing back the frame group captured at M frames/sec in the slow playback mode at the normal frame rate without decimation upon playing back the moving image data.

19. (currently amended): The apparatus according to claim [[16]] 10, wherein said second playback means includes a manual mode that executes slow playback upon reception of a slow playback instruction, and an auto mode that executes a slow playback process irrespective of the presence/absence of a slow playback instruction.

20. (currently amended): An image processing method of playing back moving image data, respective frames of which are compression-encoded for respective subbands of hierarchical frequency components to be independently decodable, comprising:

a decoding step of decoding the compression-encoded frames;

a first playback step of reading out, when switching means for switching a playback mode between a normal playback mode and slow playback mode selects the normal playback mode, data within a first range from low to high hierarchical components of respective frames from the moving image data, decoding the readout frames in the decoding step, and playing back the decoded frames; and

a second playback step of, when said switching means selects the slow playback mode, reading out data within a second range, broader than the first range, from low to high hierarchical components of respective frames from the moving image data, decoding the readout frames in the decoding step, and playing back the decoded frames,

wherein a high-definition frame group in the moving image data is moving image data which, when a frame rate that can assure sufficiently high image quality of a moving image is expressed by N frames/sec, has a frame rate of M (M > N) frames/sec higher than that frame rate, and respective frames of which are compression-encoded to be independently decodable,

wherein said first playback step includes reading out respective frames from the image data at a first frame interval, decoding the readout frames by means of said decoding step, and playing back the decoded frames at substantially N frames/sec, and

wherein said second playback step includes reading out respective frames from the image data at a second frame interval narrower than the first frame interval, decoding the readout frames by means of said decoding step, and playing back the decoded frames at least at substantially N frames/sec.

21. (currently amended): A computer-readable medium storing a computer program ~~serving~~ for causing a computer to serve as an image processing apparatus for playing back moving image data, respective frames of which are hierarchically compression-encoded to be independently decodable, said program serving as:

decoding means for decoding the compression-encoded frames;

first playback means for, when switching means for switching a playback mode between a normal playback mode and slow playback mode selects the normal playback mode, reading out data within a first range from low to high hierarchical components of respective frames from the moving image data, decoding the readout frames by said decoding means, and playing back the decoded frames; and

second playback means for, when said switching means selects the slow playback mode, reading out data within a second range, broader than the first range, from low to high hierarchical components of respective frames from the moving image data, decoding the readout frames by said decoding means, and playing back the decoded frames,

wherein a high-definition frame group in the moving image data is moving image data which, when a frame rate that can assure sufficiently high image quality of a moving image is expressed by N frames/sec, has a frame rate of M (M > N) frames/sec higher than that frame rate, and respective frames of which are compression-encoded to be independently decodable,

wherein said first playback step includes reading out respective frames from the image data at a first frame interval, decoding the readout frames by means of said decoding step, and playing back the decoded frames at substantially N frames/sec, and

wherein said second playback step includes reading out respective frames from the image data at a second frame interval narrower than the first frame interval, decoding the readout frames by means of said decoding step, and playing back the decoded frames at least at substantially N frames/sec.

22. (canceled).